CLAIMS

1. (Previously Presented) An apparatus, wherein the apparatus is a temperature-independent microscopic switch, comprising:

a substrate, wherein the substrate is at least configured to support the switch;

a conductive beam, wherein the conductive beam is at least configured to be suspended from an anchor with one free end;

means for engaging, wherein the means for engaging at least engages the conductive beam to allow signal transmission; and

at least one tether, wherein the at least one tether is at least configured to be attached to a fixed location and attached to the conductive beam away from the anchor.

2. (Previously Presented) The apparatus of Claim 1, wherein the apparatus further comprises means for insulation, wherein the means for insulation at least provides a non-conductive barrier between the conductive beam and at least one electrode when the microscopic switch is engaged.

3. (Original) The apparatus of Claim 2, wherein the means for insulation further comprise air.

4. (Original) The apparatus of Claim 2, wherein the means for insulation further comprise Silicon Oxide (SiO_2).

5. (Original) The apparatus of Claim 2, wherein the means for insulation further comprise Silicon Nitride (Si_3N_4).

6. (Previously Presented) The apparatus of Claim 1, wherein the apparatus further comprises an ohmic contact at least during a portion of when the microscopic switch is engaged.

7-16. (Cancelled)

17. (Currently Amended) A method of operation of a temperature-independent microscopic switch, comprising:

~~engaging the switch;~~

~~signal transmission through the switch once engaged;~~

~~disengaging the switch once the signal is transmitted;~~

actuating a micromechanical beam; and

~~preventing of warping~~limiting movement of ~~a flexible~~the beam with a tether attached to the beam at a point different than an attachment point for an anchor ~~that is configured to at least operate as a throw arm once the temperature independent microscopic switch is engaged by restraining upward warping movement of the flexible beam from a nonengaged position while permitting downward movement of the flexible beam to a sufficient degree to allow engaging the switch~~.

18. (Currently Amended) The method of Claim 17, wherein ~~the step of preventing of warping further~~limiting movement of the beam comprises ~~one or more engaging tethers~~limiting movement of a cantilevered beam.

19-23. (Cancelled)

24. (Previously Presented) A cantilever MEMS switch comprising a cantilever arm having a portion attached to a substrate and a movable portion and further comprising a tether having at least two ends, wherein a first end of the tether is at least coupled to a fixed location, and wherein, a second end of the tether is at least coupled to the movable portion of a cantilever arm.

25. (Original) The cantilever MEMS switch of Claim 24, wherein the substrate is at least configured to be non-conductive.

26. (Original) The cantilever MEMS switch of Claim 25, wherein the apparatus further comprises means for insulation, wherein the means for insulation at least provides a non-conductive barrier when the microscope switch is engaged.

27. (Original) The cantilever MEMS switch of Claim 26, wherein the means for insulation further comprise air.

28. (Original) The cantilever MEMS switch of Claim 26, wherein the means for insulation further comprise Silicon Oxide (SiO_2).

29. (Original) The cantilever MEMS switch of Claim 26, wherein the means for insulation further comprise Silicon Nitride (Si_3N_4).

30. (Previously Presented) The cantilever MEMS of Claim 25, wherein the cantilever MEMS further comprises an ohmic contact at least during a portion of when the cantilever MEMS is engaged.

31-37. (Cancelled)

38. (Previously Presented) The apparatus of Claim 1, wherein the anchor comprises a mechanical post coupled to a proximal end of the conductive beam and coupled to the substrate, the proximal end being opposite the free end of the conductive beam, whereby, the mechanical post anchors the conductive beam.